

## CLAIMS

1. A plastic sheet with folding rules, being a plastic sheet provided with concave folding rules composed of a pair of side faces inclined at specified angle  
5 and mutually facing oppositely, and a narrow bottom face consecutive to an end of side faces,

wherein shallow grooves are formed at specified intervals in the longitudinal direction along the bottom face of the folding rules, and

a plurality of deeper grooves than the shallow grooves are formed in the  
10 longitudinal direction along the bottom face between the shallow grooves.

2. The plastic sheet with folding rules of claim 1,  
wherein the deep grooves are formed at different depths.

3. The plastic sheet with folding rules of claim 1,  
wherein grooves of medium depth deeper than the shallow grooves and  
15 shallower than deep grooves are formed in the bottom between the shallow grooves.

4. A rule cutter for plastic sheet used in forming folding rules in folding portions of plastic sheet, comprising a pair of side faces inclined at specified angle and mutually facing oppositely, and a narrow top face consecutive to an end of side faces,  
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wherein blades of shallow infeed are formed at specified intervals in the longitudinal direction along the top face of the rule cutter, and

a plurality of blades of deeper infeed than the shallow blades are formed in the longitudinal direction along the top face between the shallow blades.

5. The rule cutter for plastic sheet of claim 4,  
25 wherein the shallow blades are set at different depths of infeed.

6. The rule cutter for plastic sheet of claim 4,

wherein blades of medium infeed deeper than the infeed of the shallow grooves and shallower than the infeed of the deep grooves are formed on the top between the shallow blades.

5        7. The plastic sheet with folding rules of claim 1 or the rule cutter for plastic sheet of claim 4,

wherein the deep grooves and deep blades are set at dimensions deeper by a specified rate from the shallow grooves and shallow blades.

8. A plastic sheet with folding rules, being a plastic sheet provided with  
10        concave folding rules composed of a pair of side faces inclined at specified angle and mutually facing oppositely, and a narrow bottom face consecutive to an end of side faces, characterized by:

forming a plurality of grooves shallower than the folding rules in the overall length of bottom of folding rules, and

15        inclining the grooves at a specified angle to the rule forming direction of folding rules to arrange in a rope pattern.

9. The plastic sheet with folding rules of claim 8,

wherein holes penetrating in the thickness direction in the bottom of the folding rules are formed in the bottom between grooves.

20        10. The plastic sheet with folding rules of claim 8,

wherein the dimensions of parts of grooves are set in dimensions included in a specified range suited to folding of the plastic sheet.

11. A rule cutter for plastic sheet used in forming folding rules in folding portions of plastic sheet, comprising a pair of side faces inclined at specified angle  
25        and mutually facing oppositely, and a narrow top face consecutive to an end of side

faces, characterized by:

forming a plurality of concave blades in the overall length of top of rule cutter,  
and

inclining the blades at a specified angle to the rule forming direction of folding  
5 rules to arrange in a rope pattern.

12. The rule cutter for plastic sheet of claim 11,  
wherein holes penetrating in the thickness direction in the bottom of the  
folding rules are formed in the bottom between grooves.

13. The rule cutter for plastic sheet of claim 11,  
10 wherein the dimensions of parts of grooves are set in dimensions included in a  
specified range suited to forming of folding rules in the plastic sheet.

14. A plastic sheet with folding rules, being a plastic sheet provided with  
concave folding rules composed of a pair of side faces inclined at specified angle  
and mutually facing oppositely, and a narrow bottom face consecutive to an end of  
15 side faces, characterized by:

forming a plurality of grooves at depths depending on the thickness of the  
plastic sheet at specified intervals in the longitudinal direction along the bottom of  
folding rules, and

forming grooves at depths depending on the thickness of the plastic sheet but  
20 shorter than the above grooves in the longitudinal direction, in the longitudinal  
direction along the bottom between the grooves.

15. The plastic sheet with folding rules of claim 14,  
wherein the grooves are formed at nearly same or different depths.

16. The plastic sheet with folding rules of claim 14 or 15,  
25 wherein the grooves are formed in a smooth curvature.

17. The plastic sheet with folding rules of claim 14, 15, or 16,  
wherein parts of the grooves are set at dimensions included in a specified rate  
suited to folding depending on the thickness of the plastic sheet.

18. A rule cutter for plastic sheet used in forming folding rules in folding  
5 portions of plastic sheet, comprising a pair of side faces inclined at specified angle  
and mutually facing oppositely, and a narrow top face consecutive to an end of side  
faces, characterized by:

forming a plurality of blades at heights depending on the thickness of the  
plastic sheet at specified intervals in the longitudinal direction along the top of the  
10 rule cutter, and

forming blades at heights depending on the thickness of the plastic sheet but  
shorter than the above blades in the longitudinal direction, in the longitudinal  
direction along the top between the blades.

19. The rule cutter for plastic sheet of claim 18,  
15 wherein the blades are formed at nearly same or different heights.

20. The rule cutter for plastic sheet of claim 18 or 19,  
wherein the blades are formed in a smooth curvature.

21. The rule cutter for plastic sheet of claim 18, 19, or 20,  
wherein parts of the blades are set at dimensions included in a specified rate  
20 suited to forming of folding rules depending on the thickness of the plastic sheet.

22. A plastic sheet with folding rules, being a plastic sheet provided with  
concave folding rules composed of a pair of side faces inclined at specified angle  
and mutually facing oppositely, and a narrow bottom face consecutive to an end of  
side faces, characterized by:

25 forming a plurality of shallower grooves than folding rules and deeper grooves

than shallow grooves, in the longitudinal direction along the bottom of folding rules,  
and

forming a plurality of smaller protrusions than the grooves in the longitudinal  
direction along the top of the grooves.

5        23. The plastic sheet with folding rules of claim 22,  
wherein the small protrusions are formed in the shallow grooves and deep  
grooves.

24. The plastic sheet with folding rules of claim 22 or 23,  
wherein the shallow grooves and deep grooves are formed at different depths  
10 or same depth.

25. The plastic sheet with folding rules of claim 22, 23, or 24,  
wherein the grooves and protrusions are formed in a specified size depending  
on the thickness of the plastic sheet.

26. The plastic sheet with folding rules of claim 22, 23, or 24,  
15 wherein the grooves and protrusions are formed in a smooth curvature as seen  
from the longitudinal direction of the folding rules.

27. A rule cutter for plastic sheet used in forming folding rules in folding  
portions of plastic sheet, comprising a pair of side faces inclined at specified angle  
and mutually facing oppositely, and a narrow top face consecutive to an end of side  
20 faces, characterized by:

forming a plurality of shallower blades than folding rules and deeper blades  
than shallow blades, in the longitudinal direction along the top of the rule cutter, and  
forming a plurality of smaller recesses than the blades in the longitudinal  
direction along the bottom of the blades.

25        28. The rule cutter for plastic sheet of claim 27,

wherein the small recesses are formed in the shallow blades and deep blades.

29. The rule cutter for plastic sheet of claim 27 or 28,

wherein the shallow blades and deep blades are formed at different depth or same depth.

5 30. The rule cutter for plastic sheet of claim 27, 28, or 29,

wherein the blades and recesses are formed in a specified dimension depending on the thickness of the plastic sheet.

31. The rule cutter for plastic sheet of claim 27, 28, or 29,

wherein the blades and recesses are formed in a smooth curvature as seen from  
10 the longitudinal direction of the rule cutter.

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